

Open Avionics System Integration Study (OASIS) *Mid-Term Status Summary*

20 March, 2000

Boeing Phantom Works

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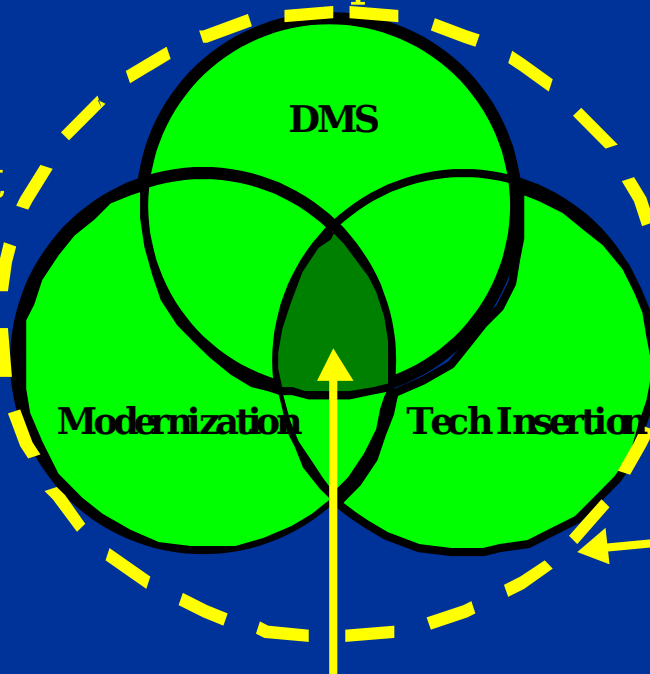


Scope of the Problem

Birthplace, Home and Future of Aerospace

Ability to Efficiently Respond to Loss of Supplier Base or
Discontinuance of Specific Product Line

Ability to Efficiently React
to New
Requirements/Capability
Needs Resulting From
Evolving Threat and Force
Structure



Ability to Efficiently
Insert New Technology

Total Ownership Cost

**Goal is to Leverage Affordable Solutions Which Respond to All
Three Concerns Across Multiple Platforms**

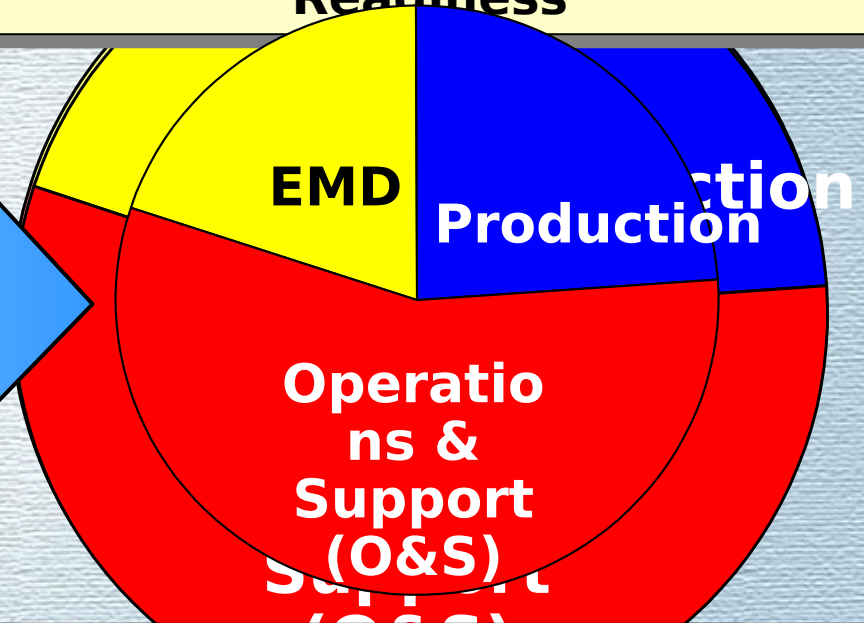
OASIS

A Multi-Platform Open System Solution

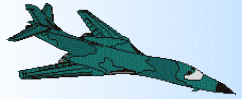


**Limited Funding and Rising O&S Cost
Constrains Modernization and Readiness**

OASIS



**Multi-Platform Open System Solutions
Enable Affordable Modernization and Reduced Ownership Costs**



B-1B
93 Aircraft



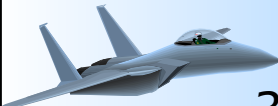
B-2
21 Aircraft



B-52
76 Aircraft



C-17
120 Aircraft

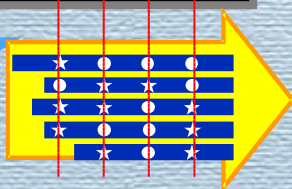
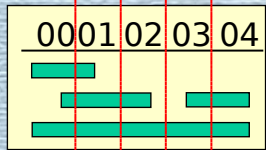
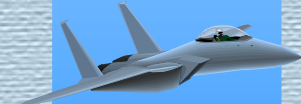
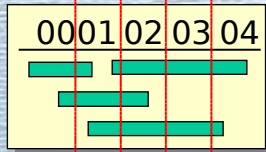
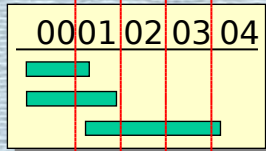
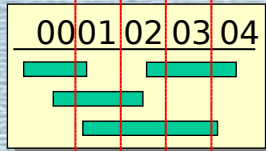
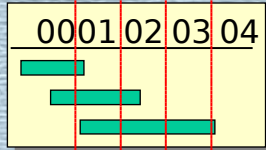


F-15
398 C/D Aircraft
214 E Aircraft

OASIS Approach



Roadmaps



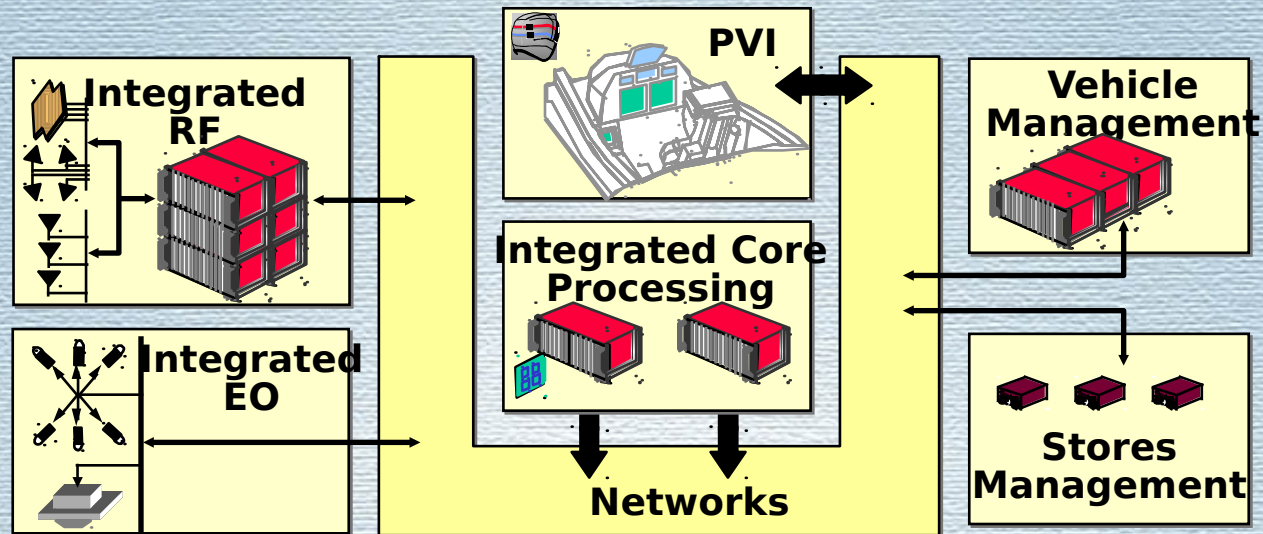
**Multi-Platform
Roadmaps**

- **Survey Platform Roadmaps & Funding**
- **Identify Opportunities for Open Systems**
- **Identify Cross Platform**

Multi-Platform Open System Opportunities

- **Core Processing Infrastructure**
 - Displays & Video Processing Architecture
- **Electronic Warfare (EW)**
 - Radar Warning Receiver & Jammers
- **Communication/Navigation/Identification (CNI)**
 - Global Air Traffic Management (GATM)
 - Beyond Line Of Sight (BLOS) Comm
- **Electro-Optic Sensor**
 - Advanced Targeting FLIR (ATFLIR)

OASIS Migration to Open Systems



- **Core Infrastructure: Processors, Networks and Displays & Electronic Warfare**
- **Communications Navigation and Identification**

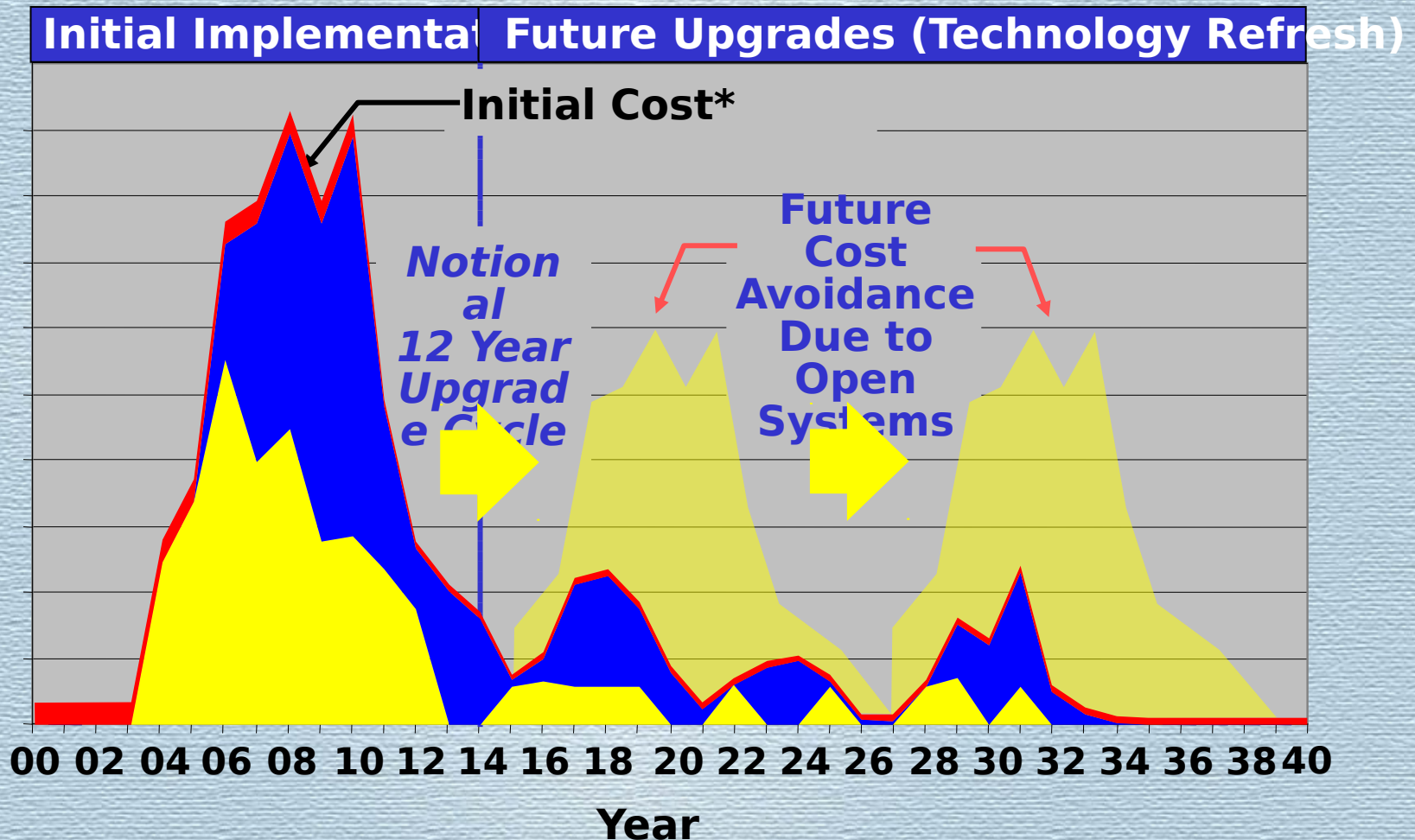
Incremental Approach for Affordable Open Systems Avionics



OASIS Display & Video - A Technical Imperative -

■ 3600 (EMD) ■ 3010 (Production) ■ 3400 (O&M)

Annual Cost for Display & Video Architecture (FY'00 \$M)



* Includes EMD and Production Costs, Excludes F-15 MSIB

OASIS Phase I

Lessons Learned



Platform Roadmaps & Planned Funding

- **POM Funding Does Not Address Long Term Program Needs**
- **Need Stable Long Term Modernization & Funding Plan (20 Yrs)**

Open System Architecture Migration Plans

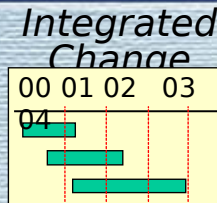
- **Platforms are Beginning to Migrate to Open Systems**
- **Need Consistency in Long Term Open Systems Migration Plans**
- **Need Integrated Strategy for Affordability (Modernization & O&S)**

Avionics Cost Data

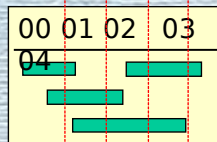
- **Difficult to Obtain Defensible Cost Data for TOC Analysis**
- **Block Upgrades Make Funding Analysis Difficult**
- **Difficult to Quantify Defensible Current & Future DMS/OP Costs**
- **Need USAF Support to Address O&S Manning (Public**

Open Avionics Systems Integrated Solutions (OASIS)

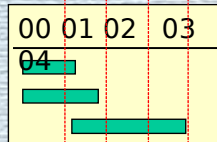
B-1B
93 Aircraft



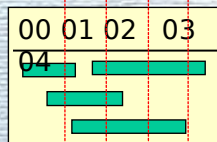
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21 Aircraft



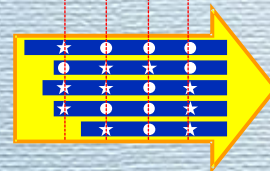
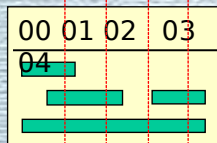
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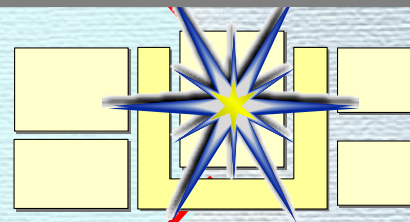


F-15
218 E Model
398 C/D Model



Multi-Platform Roadmaps

- OASIS has Identified Multi-Platform Open Systems Savings
- OASIS can be a Model for Multi-Platform Open System Solutions to Reduce TOC



Leverage Open System Avionics

